Code No: D6401

R09

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.Tech II - Semester Examinations, March 2011
RENEWABLE ENERGY RESOURCES
(POWER ENGINEEEING AND ENERGY SYSTEMS)

Time: 3hours   **Max. Marks: 60**

Answer any five questions
All questions carry equal marks

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1. Determine the efficiency of flat plate solar collector and also explain. What are the methods to improve the efficiency of flat plate solar collector at high temperatures?
    [12]

2. Explain active and passive solar systems?   [12]

3. Prove that the torque produced by a wind turbine rotor of radius R can be expressed as $\Gamma = (\pi/2)C_\text{P}R^3 u_0^2/\lambda$ [12]

4. Explain HAWT and VAWT?   [12]

5. Explain anaerobic digestion for biogas?   [12]

6. Explain the principle and environmental impacts of OTEC?   [12]

7. Explain briefly causes of tides?   [12]

8. Explain how thermal power is estimated?   [12]

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